

REMARKS

The present invention allows specific programs to be transmitted prior to a reproduction time for the specific program, while broadcast programs are transmitted at a start of a reproduction time for the broadcast program. The present invention utilizes various event messages which provide instructions for a receiver of the specific program to perform actions such as reproducing, deleting, or storing the specific program. (Pg. 18, lns. 5 – 19). Once a receiving apparatus receives the event messages, the receiving apparatus can execute a corresponding script for control to perform the actions instructed by the event messages. (Pg. 11, lns. 19 – 21). Furthermore, the event messages are transmitted in a different transmission cycle than the specific program or the scripts for control. This increases an amount of times the event messages are transmitted and also increases the likelihood that the receiving apparatus will receive the event messages.

The Office Action rejected Claims 11-18 under 35 U.S.C. § 103(a) as being unpatentable over *Willard* (U.S. 6,374,405) in view of *Delpuch* (U.S. 5,448,568).

The amendments to the Claim language do not constitute new matter and support for the limitations can be found, for example in page 11, lines 8 – 21 quoted below and other sections of the specification:

Here, the control contents means contents including scripts for control only, which designate the receiving apparatus to perform operations such as display and reproduction. These scripts run when the receiving apparatus receives event messages from the broadcasting apparatus so as to control the operation of the receiving apparatus in accordance with the event messages. For instance, an event message which designates a cache operation has “a message ID and an ID of the data module as a target” as the contents and the script is a program in which the process (i.e., cache) corresponding to the message ID is described for the ID of the contents which should be processed. While, the receiving

apparatus, when receiving the event message, executes the script corresponding to the event message.

Willard and *Delpuch* do not teach or suggest, as recited in the claim language, wherein

[E]ach of the first messages and the second message is transmitted separately from the specific program and the scripts for control in a repeated cycle that is different from a repeated cycle of transmitting the specific program and the scripts for control, the first messages and the second message being multiplexed with the specific program and/or the scripts for control.

The Office Action cites to auxiliary packet 58 as the first message. As seen in FIG. 5, a module 51 comprises a plurality of transmission units 54. Each of the transmission units 54 includes a header 54, which can be an auxiliary packet 58, and a plurality of data units 59. (Col. 7, ln. 28 – 65) Since the auxiliary packets 58 and the data units 59 are part of the transmission units 54, they are transmitted together instead of separately. There is no teaching within *Willard* that the auxiliary packets 58 are transmitted separately from the data units 59 and more specifically transmitted on differed cycles. Since the auxiliary packets 58 are transmitted with the data units 59, a large amount of data are transmitted in the same transmission cycle, the amount of times that the auxiliary packets 58 is reduced with an increase in a number of data units 59. This can be problematic as it reduces the likelihood that the correct auxiliary packets 58 would be successfully transmitted in case there is an error.

With respect to the second stream, the Office Action on pages 7 and 8 cite to a signal module in *Depulche* for the second stream. However, *Depluche* discloses that the signal module “must be situated in the program stream sufficiently prior to the occurrence of the second segment” (Col. 11, lns. 19 – 26) Thus, the signal module is transmitted along with the program stream and not separately from the program stream.

In contrast, in the present invention, the first messages and the second message are transmitted separately from the specific program and the scripts for control. In accordance with the contents transmission schedule transmitted by the contents transmission scheduling unit 103, the data module transmission controlling unit 108 repeatedly reads the data module which corresponds to the contents codes included in the schedule from the data module holding unit 109, and outputs the data module to the multiplexing unit 111. (Pg. 21, ln. 25 – Pg. 22, ln. 4) The data modules are generated from the contents data which include graphical images which present information relating to the program, scripts which are executed in accordance with interactive operations by a user, and scripts which correspond to the event messages. (Pg. 16, lns. 11 – 13). The scripts run when the receiving apparatus receives event messages from the broadcasting apparatus so as to control the operation of the receiving apparatus in accordance with the event messages. (Pg. 11, ln 12 – 14).

However, the event messages (first message and the second message), which are different from the scripts, are transmitted separately from the data modules. The event messages are transmitted according to the event message transmission schedule. (Pg. 18, lns. 5 – 8) Since the event messages and the specific program and the scripts for control are transmitted on different cycles, even if there is an increase in the size of the specific program and the scripts for control, the amount of times the event messages are transmitted is not affected. Furthermore, the event messages such as the first messages and the second message are transmitted in a cycle shorter than that of the specific program and the specific scripts for control. This allows a greater probability and certainty that the event messages will be successfully transmitted.

In addition, the event messages have a smaller size than the specific program. Thus, the increased transmission frequency of the event messages do not interfere with the transmission of the specific program.

Willard and *Delpuch* also fail to disclose “first messages which specify the specific program and instruct the receiving apparatus to store the specific program in a storing unit within the receiving apparatus.” The Office Action on page 3 indicates that it interprets instructs to be “analyzed as an action resulting from a previous action.” However, according to Webster’s Ninth New Collegiate Dictionary, instructs is defined as

- 1: to give knowledge to (e.g. teach or train);
- 2: to provide with authoritative information or advice (e.g. the judge *instructed* the jury); or
- 3: to give an order or command to (e.g. direct)

In the context of the claim language, the most appropriate definition is “to give an order or command to.” Auxiliary packet 58 does not “give an order or command to” the CPU. Instead, the CPU inspects the information contained in the auxiliary packet 58, and then determines based on the information in the auxiliary packet 58 whether the module 51 should be decoded and where it should be loaded into memory. (Col. 6, lns. 55 – 65) For example, an SAT score, a high school GPA, and a personal statement, may provide all of the information necessary for a university to determine whether a student should be accepted into the university, but the student does not instruct the university to accept the student. *Depulch* also does not remedy the deficiencies of *Willard*.

In contrast, in the present invention, when the receiving apparatus receives the event message which instructs the receiving apparatus to cache the data and the data has not already been cached, the receiving apparatus writes the received data in the buffer. (Pg. 18, lns. 9 – 19)

Neither *Willard* nor *Depulch* disclose “the transmission unit repeatedly transmits contents including scripts control, for a duration from a transmission starting time of the specific program to a reproduction finishing time of the specific program, the transmission unit transmitting the entire specific program at least once prior to the reproduction starting time of the specific program” and the “transmission finishing time is set at the reproduction starting time.” The Office Action on Page 4 states that “if the user defined delivery time is before the transmission time, the last [packet] will be delivered before the claimed ‘reproduction time.’” However, user action is not the same as a component that performs the action automatically. Furthermore *Willard* does not disclose the desirability of having the entire specific program being transmitted before the reproduction start time. *Depulch* also does not remedy the deficiencies of *Willard*.

Accordingly, on this record, Appellants have established that one of ordinary skill in this art would not have combined the teachings of Barbee, Esler, and DeSisto in a manner to arrive at the claimed apparatus. *See, e.g., KSR Int’l C. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007) (“it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”); *In re Kahn*, 441 F.3d 977, 985-88 (Fed. Cir. 2006); *In re Rouffet*, 149 F.3d 1350, 1358 (Fed. Cir. 1998) (“hindsight” is inferred when the specific understanding or principal within the knowledge of one of ordinary skill in the art leading to the modification of the prior art in order to arrive at appellant’s claimed invention has not been explained); *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (“The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.”); *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1050-54 (Fed. Cir. 1988); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“the test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art”).

Ex parte Satake et al., Appeal 2007-5078, slip op. at 9-10 (B.P.A.I. Nov. 25, 2008) (emphasis added)

Willard and *Depulch* also fail to disclose “wherein the scheduling unit generates the schedule so that (a) as for a specific program among the broadcast programs, a transmission starting time is set at a time which is a predetermined amount of time before the reproduction starting time of the specific program and a transmission finishing time is set at the reproduction starting time of the specific program, and (b) as for a broadcast program other than the specific program, a transmission starting time is set at the reproduction starting time of the broadcast program and a transmission finishing time is set at the reproduction finishing time of the broadcast program.” In *Willard*, there is no distinction between the interactive television application/program and the audio/video signals for transmission scheduling. The interactive television application/program and the audio/video signals are transmitted together. (Col. 5, ln. 55 – Col. 6, ln. 16) Thus, *Willard* does not disclose that the interactive program should complete transmission before the reproduction start time of the interactive program, while the audio/video signals should start transmission at the reproduction start time of the interactive program.

In contrast, in the present invention, the specific programs are transmitted before the reproduction start time for the specific program and the data broadcasting program is transmitted at the start time of the data broadcasting program. (Pg. 16, ln. 23 – Pg. 17, ln. 3; FIG. 5) As seen in FIG. 5, the data broadcasting program indicated as program 1 is transmitted at 8:00:00 through 8:14:00 which corresponds to the start and end time for reproduction of the program 1. However, the specific program CM1 is transmitted between 8:13:45 to 8:14:00, which is before the 8:14:00 start time for the specific program CM1.

Willard and *Depulch* fail to disclose “the transmission unit repeatedly transmits contents including scripts for control” and “the scripts for control perform control so that (a) the specific program is stored in the storing unit within the receiving apparatus in a case where the receiving

apparatus receives the first messages.” The Office Action on page 6 and page 7 cited to the auxiliary packets 58 as both the first messages and the scripts for control. However, if the auxiliary packets 58 are the first messages, then *Willard* does not teach the scripts for control since the scripts for control are different from the first messages as indicated by the fact that they are transmitted in separate cycles.

As noted in the specification of the present invention, when the receiving apparatus receiving the event message, it executes the script corresponding to the event message. (Pg. 11, lns. 19 – 21)

Willard and *Depulch* also fail to teach or suggest “the scripts for control are cached in the receiving apparatus even when the receiving apparatus does not receive an explicit instruction to cache the scripts for control.” If, as the Office Action claims that the auxiliary packet 58 contains instructions, and there is no indication that it does, then *Willard* does not disclose that the auxiliary packet 58 is cached even when there is no explicit instruction to cache the auxiliary packet 58.

In contrast, in the present invention, data module generation unit 104 can generate a data module with ID=0 which corresponds to control contents S1001. (Pg. 17, ln. 11 – 14; FIGS. 4, 5) When the data module has an ID=0, the data module must be cached in the buffer by the receiving apparatus even though the receiving apparatus has not received an explicit instruction to cache the data module. (Pg. 16, lns. 17 – 19). Advantageously this ensures that the control contents are cached in the data module.

With respect to Claim 12, neither *Willard* nor *Depulch* teach or suggest “wherein the generation unit generates a third message which specifies the specific program and instructs the receiving apparatus to delete the specific program stored in the storing unit.” The Office Action

on page 8 cites to Column 10 lines 53-64 in *Depulch* for the features of the present invention. However, *Depulch* teaches that the signal module can contain a type of to condition a current application to respond in a predetermined manner such as self termination, suspension of execution, or resumption of execution. However, self termination does not indicate that the current application will be deleted. A program can cease executing completely without being deleted. For example, a computer program can be terminated without the computer program being deleted in a hardware. Thus, *Depulch* does not teach the features of the present invention and Willard also does not remedy the deficiencies of *Depulch*.

In contrast, in the present invention, when the receiving apparatus receives an event message which instructs the receiving apparatus to delete the contents data, the receiving apparatus deletes the contents data from the buffer. (Pg. 18, lsn. 10 – 12)

All arguments for patentability with respect to Claim 11 is repeated and incorporated herein for Claims 13 – 16.

Claim 12 is dependent upon and further defines Claim 11 and is thus allowable, too.

For the reasons stated above, Applicant now believes the application is in condition for allowance and early notification of the same is respectfully requested.

If the Examiner believes a further telephone conference would assist in the prosecution, the undersigned attorney can be contacted at the listed phone number.

Very truly yours,

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